

# NEWS TODAY

## India has emerged as the world's third largest biofuel producer

Biofuels represent renewable energy fuels which are **derived from organic sources** such as biomass and organic waste.

- These can be **broadly categorized in three types: Liquid Biofuels** (ethanol, biodiesels, bio-methanol etc.), **Biogas** (Bio-LNG, Bio-CNG) and **Solid Biomass**.
- India has achieved **19.6% ethanol blending in petrol** as of January 2025 and is on track to reach 20%, five years ahead of its original 2030 target.

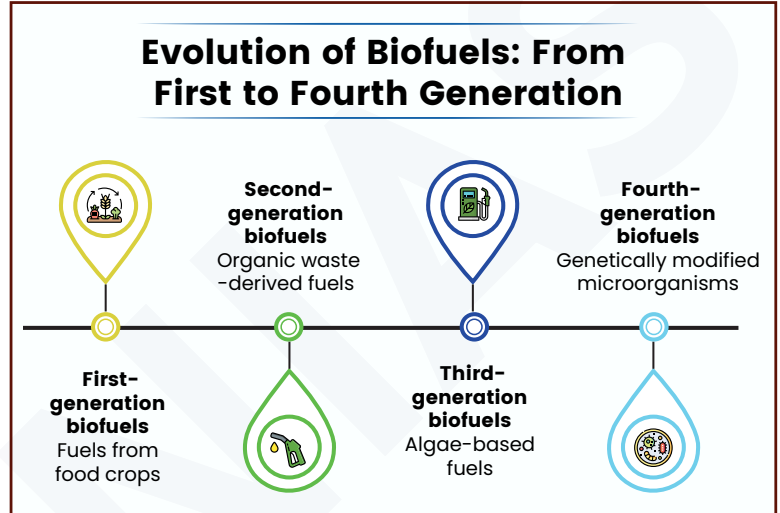
### Significance of Biofuels

- **Fulfilment of Energy Demand:** India accounts for more than a quarter of net global primary energy demand growth between 2017-2040.
- **Environment Impact:** Biofuel Promotion helped in reducing CO<sub>2</sub> emissions by 519 lakh metric tons, and substituting 173 lakh metric tons of crude oil.
- **Energy Security:** Ethanol blending programme has reduced import dependency and saved **Rs. 85,000 crore in foreign exchange**.
- **Circular Economy:** Enables circularity by employing waste for wealth creation and delivering wider socioeconomic benefits.
- **Rural Development:** Provides additional financial incentives to farmers through development of market for agricultural residues/wastes.

### Challenges in biofuel production

- **Feedstock challenge:** Lack of quality feedstock, competing demand for feedstock affecting food security and fragmented and complex waste supply chain.
- **Technological:** Negligible commercial viability of advanced biofuel production.
- **Funding:** High capital expenditure requirement and uncertainty of profit margins.

**Key Initiatives:** National Policy on Biofuels 2018, Pradhan Mantri JI-VAN Yojana, Galvanizing Organic Bio-Agro Resources Dhan (GOBARdhan), SATAT Scheme on Compressed Bio Gas etc.



## From Borrowers To Builders: Women's Role In India's Financial Growth Story" Report released

The report has been jointly published by **TransUnion CIBIL**, **Women Entrepreneurship Platform (WEP)** of NITI Aayog, and **MicroSave Consulting (MSC)**.

### Key Highlights

- **Steady Rise in Women Borrowers:** Women seeking credit grew ~3X between 2019 and 2024, reflecting increased demand.
- **Demographics of Women Borrower:** 60% of women borrowers are from semi-urban or rural areas.
  - ⊖ Women under 30 only account for 27% of retail credit uptake by women, compared to 40% for men.
- **Regional Status:** Southern states have higher shares of women borrowers as compared to Northern and Central States.
- **Rise in Awareness:** 27 million women borrowers had checked their credit information and score with CIBIL.

### Challenges faced by Women Borrowers

- **Credit Aversion:** Women avoid formal loans due to social norms, fear of default repercussions, and complex application processes.
- **Poor Banking Experience:** Many banks are unwelcoming and fail to offer advisory services tailored to women's needs.
- **Limited Institutional Support:** Women are perceived as higher-risk borrowers due to limited credit history and business experience.
  - ⊖ E.g. 79% of women-owned businesses are self-financed, with only 7% of MSME credit directed to women.
- **Barriers to Credit readiness:** Due to lack of necessary documentation, guarantors, and collateral.
  - ⊖ E.g. ~22.2% of women-led collective enterprises are not credit-ready.

### Recommendations

- **Expand Women's Access to Business Loans:** Adopt policies for affordable credit, collect sex-disaggregated data and expand guarantee covers
- **Develop Gender-Intelligent Financial Products** by designing tailored products addressing women's lifecycle needs, social norms and structural barriers.
- **Reimagine Credit Risk Assessment:** By using AI, big data to prevent gender bias.
- **Boost Credit Readiness:** By promoting digital transactions, bookkeeping, and business formalization.

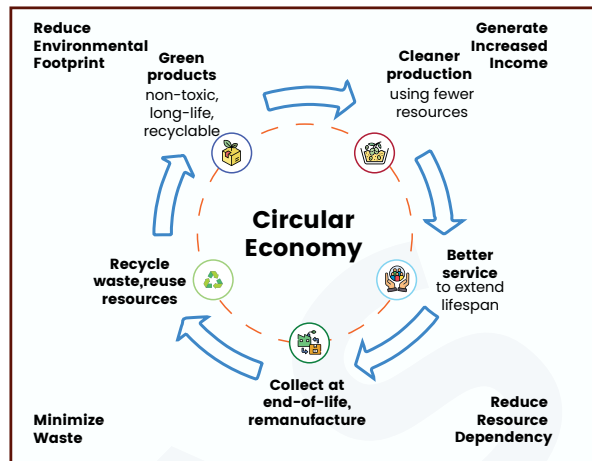
## Twelfth Regional 3R (Reduce, Reuse, Recycle) and Circular Economy Forum in Asia & the Pacific starts in Jaipur

Launched in 2009, Forum aims to promote sustainable waste management, resource efficiency, and circular economy principles across the region.

- In 2013, the forum had adopted the **Hanoi 3R Declaration (2013-2023)**, which outlined **33 voluntary goals** for shifting towards a more resource-efficient and circular economy.

### Key Highlights of Forum

- **Jaipur 3R and Circular Economy Declaration (2025-2034):** For achieving resource efficient, clean, resilient, sound material cycle and low-carbon society.
- **Cities Coalition for Circularity (C-3):** Launched as a **multi-nation alliance for city-to-city collaboration**, knowledge-sharing, and private sector partnerships.
  - ⊖ Formation of a **working group of member nations** to finalize the coalition's structure and operational framework is also proposed.
- **Signing of MoU for CITIIS 2.0: City Investments to Innovate Integrate and Sustain (CITIIS) 2.0** is a subcomponent of India's Smart Cities Mission.
  - ⊖ It is providing **financial and technical assistance for promoting a circular economy** through integrated waste management projects at city level.



### Circular Economy

It is a **model of production and consumption**, which involves **sharing, leasing, reusing, repairing, refurbishing and recycling** existing materials and products as long as possible.

- It is a departure from the **traditional, linear economic model**, which is based on a **take-make-consume-throw** away pattern.
- **India's Initiatives:** Swachh Bharat Mission, GOBAR-Dhan Scheme, E-Waste Management Rules 2022, Mission LIFÉ etc.

## Prime Minister chairs 7<sup>th</sup> meeting of National Board for Wildlife

The PM stressed usage of technology (e.g. **remote sensing, AI**), collaboration of institutes (e.g. **Wildlife Institute of India, Forest Survey of India & BISAG-N**) to combat issues of forest fires and human-animal conflicts.

### Key decisions taken:-

- **1<sup>st</sup> riverine dolphin estimation report released:** It estimates number of dolphins at 6,327.
  - ⊖ **Highest Numbers:** Uttar Pradesh>Bihar>West Bengal>Assam.
- Establishment of **National Referral Centre for Wildlife (Junagadh):** for wildlife health and disease management.
- Creation of **Centre of Excellence at Salim Ali Centre for Ornithology and Natural History (SACON, Coimbatore)** to deal with Human-wildlife conflict.
- Initiation of 16<sup>th</sup> Asiatic Lion Population Estimation in 2025 (last one was done in 2020)
- **Expansion of Cheetah introduction Projects to Gandhisagar Sanctuary (Madhya Pradesh) and Banni Grasslands (Gujarat).**
- **National Great Indian Bustard Conservation Action Plan and New Project for Gharials** to ensure the conservation of Gharials.
- **Support for Asiatic Lions conservation at Barda Wildlife Sanctuary** through prey augmentation and habitat improvement.

### About National Board of Wildlife

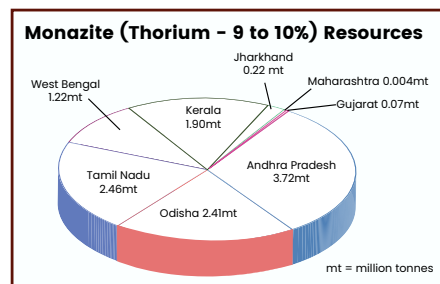
- **Genesis :** Established under **Wild Life (Protection) Act, 1972**
- **Chairperson:** Prime Minister
- **Vice-Chairperson:** Union Minister in charge of the Ministry of Environment & Forests.
- **Member-Secretary to the Board:** Additional Director General of Forests (WL) & Director, Wildlife Preservation.

## A declassified geological survey in China reports massive thorium reserves

A **Geological Review** survey estimates that **Bayan Obo mining complex in Inner Mongolia region of China** could yield **1 million tonnes of thorium**.

### About Thorium

- Thorium is a **radioactive element** that occurs naturally in low concentrations (about 10 parts per million) in the **Earth's crust**.
- **Source:** Thorium is found in **trace quantities in most rocks and soils** and is more abundant than uranium.
  - ⊖ Most common source of thorium is the **rare earth phosphate mineral, monazite**, whose richest concentrations are found in **placer deposits**.
- **Reserves:** **India has the largest thorium reserves in the world** (11.93 million tonnes of Monazite, containing 1.07 million tonnes of thorium) and is followed by Brazil, Australia, and USA.
- **Properties:** It is a **soft, ductile & silvery-white heavy metal** in its pure form.
  - ⊖ Essentially all naturally occurring thorium is present as **Thorium-232 (Th-232)**.
- **Fuel for nuclear reactors:** **Thorium-232 itself is not fissile** and is required to be converted into a **fissile material Uranium-233 (U-233)**.
  - ⊖ It is done through **irradiation of Th-232 using U-233 or Plutonium-239 (Pu-239)** as fissile driver.
  - ⊖ **Reactors able to use thorium:** Heavy Water Reactors (PHWRs), Pressurized (Light) Water Reactors (PWRs), Fast Neutron Reactors (FNRs) etc.



## Navratna status granted to Indian Railway Catering and Tourism Corporation (IRCTC) and Indian Railway Finance Corporation (IRFC)

Central Public Sector Enterprises (CPSEs) are given ratna status based on their performance and specific eligibility criteria.

### Criteria for grant of Maharatna status

Status	Financial Requirements	Global Presence	Listing Requirements
Must have <b>Navratna status</b> .	Average <b>annual turnover</b> : >Rs. 25,000 crore during the last 3 years. Average <b>annual net worth</b> : >Rs. 15,000 crore during the last 3 years. Average <b>annual net profit after tax</b> : >Rs. 5,000 crore during the last 3 years.	Should have significant <b>global presence/international operations</b> .	<b>Listed on Indian stock exchange</b> with minimum prescribed public shareholding under SEBI regulations.

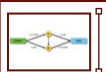
### Criteria for grant of Navratna status

Status and Ratings Requirements	Must have composite score of 60 or above in the following parameters:-
<ul style="list-style-type: none"> <li>Miniratna I, Schedule 'A'</li> <li>Should have obtained 'excellent' or 'very good' Memorandum of Understanding rating in three of the last five years.</li> </ul>	<ul style="list-style-type: none"> <li>Net Profit to Net worth (25)</li> <li>Inter Sectoral Performance (20)</li> <li>PBDIT (Profit Before Depreciation, Interest, and Tax) to Capital employed (15)</li> <li>PBIT to Turnover (15)</li> <li>Manpower Cost to total Cost of Production or Cost of Services (15)</li> <li>Earning Per Share (10)</li> </ul>

### Criteria for grant of Miniratna status

Miniratna Category-I	Miniratna Category-II
<ul style="list-style-type: none"> <li>Should have made <b>profit in the last three years continuously</b></li> <li>Pre-tax profit is Rs.30 crores or more in at least one of the three years and</li> <li>Must have a positive net worth.</li> </ul>	<p>CPSEs which have made profit for the last three years continuously and have a positive net worth.</p> <ul style="list-style-type: none"> <li>Miniratna CPSEs should have <b>not defaulted in the repayment of loans/interest payment</b> on any loans due to the Government.</li> <li>Miniratna CPSEs shall <b>not depend upon budgetary support or Government guarantees</b>.</li> </ul>

## Also in News



### Braesse's Paradox

Some analysts suggest that Bengaluru's tunnel road and double-decker road plans exemplifies Braess's Paradox.

#### About Braesse's Paradox

- It states that **adding extra capacity to a network** when the moving entities selfishly choose their route, can in some cases **reduce overall performance** by drawing more traffic, ultimately undermining their intended benefits.
- It becomes important as various cities such as **Kolkata and Bengaluru** are facing critical problems of traffic congestion as per **Tom Tom Traffic Index**.
- Solution:**
  - Rethinking urban mobility strategy** and Improving public transportation system.
  - Promoting sustainable modes of transport** like walking, cycling and public transit.



### Narwhal

Recently Narwhals have been studied for the first time for their tusk-ing behaviour.

#### About Narwhals

- Narwhals are known for their **long tusk, which is actually a tooth**.
- Males have a tusk while females do not, but there are variations. Some females may have a small tusk, some males may lack one, and some narwhals can even have two tusks.
  - Uses of Tusks:** sensing salinity and water temperatures, **hunting, adaptation to environmental changes**.
- Scientific Name:** Monodon monoceros (Meaning: **whale with one tooth and one horn**).
- Location:** **Arctic waters of Canada, Greenland, Norway and Russia**.
- IUCN Status:** Least Concern.
- Lifespan:** Females (~100 years), Males (~84 years).
- Reproduction:** Gestation Period (~13 to 16 months).



### Crypto Strategic Reserve

US President announced creation of a Crypto Strategic Reserve.

#### About CSR

- The crypto strategic reserve would be a **national stockpile of digital assets** created under a federal regulatory framework.
- **Cryptocurrencies to be used as digital assets:** Bitcoin, Ethereum, XRP, Solana, and Cardano.
- **Significance:** Similar to Strategic Petroleum Reserve, it would help diversify government holdings and hedge against financial risks.
- **Concerns:** Volatility of cryptocurrencies, Political misuse etc.



### Somnath Temple

Prime Minister Narendra Modi offers prayers at Somnath temple.

#### About Somnath Temple

- **Location:** Prabhas Patan near Veraval in Saurashtra, Gujarat
- **History:** The temple, destroyed multiple times by invaders, first in 1297 by Mahmud of Ghazni.
- **Architecture:** Present temple is in **Chalukya style of Hindu temple architecture**, last rebuilt in 1951.
- **Religious Significance:**
  - ⊕ **First among the twelve jyotirlinga** shrines of Lord Shiva.
  - ⊕ **Location: Triveni sangam** (the confluence of three rivers – Kapila, Hiran and Sarasvati).



### Proton Exchange Membrane Fuel Cells (PEMFC)

Advanced Research Centre for Powder Metallurgy and New Materials (ARCI) showcases a mobile PEMFC-based backup power solution for telecom towers.

#### About Proton Exchange Membrane Fuel Cells (PEMFC)

- **Working Principle:** It Involves **electrochemical reaction** where hydrogen gas is fed into the **anode**, oxidized to **release protons**, which then travel through a polymer membrane to the **cathode**, where they react with oxygen to **produce electricity and water**.
- **Significance**
  - ⊕ Can act as an alternative to **diesel generator (backup during grid outages)**
  - ⊕ **Promote clean energy and reducing carbon footprints**
  - ⊕ **Eco-friendly:** generates electricity with **water vapor** as the only by-product



### National Green Hydrogen Mission

Pilot Projects on Hydrogen Fuelled Buses and Trucks have been launched under National Green Hydrogen Mission.

- **Objective:** Development of commercially viable technologies for the utilization of hydrogen in the transport sector.
  - ⊕ Other objectives include validating **technical feasibility and economic viability, assess effectiveness of hydrogen refuelling station** etc.

#### National Green Hydrogen Mission

- **Objective:** Make India a **Global Hub for production, usage and export of Green Hydrogen** and its derivatives.
- **Target:** Production of 5 MMT per annum of Green Hydrogen by 2030.
- **Ministry:** Ministry of New and Renewable Energy.



### Shendurney Wildlife Sanctuary

Two new species of jumping spiders have been discovered from **Shendurney Wildlife Sanctuary**.

#### Shendurney Wildlife Sanctuary

- **Location:** Western Ghat, Kerala.
- It is part of **Agasthyamala Biosphere Reserve**, owes its name to the **endemic species, Gluta travancorica**, locally known as "Chenkurinji".
  - ⊕ It shares boundary with **Kalakkad Mundanthurai Tiger Reserve and Nellai Wildlife Sanctuary** of Tamil Nadu.
- **Major rivers -** Shendurney, Kazhuthurutty and Kulathupuzha.
- **Forest Types:** **Myristica swamp forest**.
- **Fauna:** Elephant, Gaur, Sambar, Wild bear, Malabar giant squirrel, Nilgiri langur, Lion-Tailed macaque.



### Bhopal Gas Tragedy Waste Disposal

Recently, the **trial incineration of 10 tonnes of waste** linked to the 1984 Bhopal Gas Tragedy commenced in **Pithampur area of Madhya Pradesh's Dhar district**.

- Bhopal Gas Tragedy involved a **catastrophic leak of Methyl Isocyanate (MIC) gas** from Union Carbide Facility.
  - ⊕ MIC is **used as a chemical intermediate** for production of carbamate pesticides and is extremely toxic to humans.
- The waste includes contaminated soil from the defunct facility, **reactor residues, Sevin (pesticide) residues, naphthol residues, and "semi-processed" waste**.

## Personality in News



### Lala Hardayal (1884-1939)

Recently, his death anniversary was observed.

#### About Lala Hardayal

- He was a **nationalist revolutionary and freedom fighter**.
- **Early Influence:** Arya Samaj, Mazinni, Karl Marx and Mikhail Bakunin.

#### Key Contributions

- He was a **founding member of the Ghadar Party** established in 1913 and served as its General Secretary.
- He mobilized **Indians of the diaspora** and encouraged them to be **part of freedom movement**.
- He became involved in **industrial unionism in USA**, where he served as the Secretary of the San Francisco branch of the **Industrial Workers of the World**.
- His works include '**Social Conquest of Hindu Race**', '**Forty-Four Months in Germany and Turkey**', '**The Bodhisatva Doctrine**', '**Twelve Religions and Modern Life**' etc.



AHMEDABAD



BHOPAL



CHANDIGARH



DELHI



JAIPUR



JODHPUR



GUWAHATI



HYDERABAD



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI



SIKAR